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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,096	02/09/2005	Gordhanbhai N. Patel	27845-18	4381

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EXAMINER	
JACKSON, MONIQUE R	
ART UNIT	PAPER NUMBER
1787	

MAIL DATE	DELIVERY MODE
10/01/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/524,096	PATEL, GORDHANBHAI N.	
	Examiner	Art Unit	
	Monique R. Jackson	1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 August 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-13,17,18,20,21,27,30-33,35,38,39,41,43 and 68* is/are pending in the application.

4a) Of the above claim(s) *7-11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,6,12,13,17,18,20,21,27,30-33,35,38,39,41,43 and 68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/23/10 has been entered.

2. The amendment filed 7/16/10 has been entered. Claims 2-4, 14-16, 19, 22-26, 28-29, 34, 36-37, 40, 42 and 44-67 have been canceled. Claims 1, 5-13, 17-18, 20-21, 27, 30-33, 35, 38-39, 41, 43 and 68 are pending in the application. Claims 7-11 have been withdrawn from consideration. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claim 35 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 35 recites that the thickness is larger than 0.1 millimeter however Claim 1 recites that the device is thicker than 100 microns which is the same as 0.1 millimeter.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1, 5, 17, 18, 20, 21, 27, 30, 31, 32, 33, 35, 38, 39, 41, 43, and 68 are rejected under 35 U.S.C. 102(a) as being anticipated by Tanaka et al (WO 02/102923 or USPN 7,101,497, see US 2004/0178394 for below references.) Tanaka et al teaches a photochromic material and color dose meter using the same wherein the photochromic material comprises illuminant(s) which emits a light when irradiated with a radiation and a diarylethene photochromic compound(s) which undergoes a color change upon irradiation with a radiation; wherein a resin composition comprising the photochromic material dispersed therein can be formed into a film or rod by known methods such as casting with a solvent, injection molding, extrusion molding or heat pressing to obtain a color dose meter having a thickness of from 0.01 to 10mm (Entire document, particularly Paragraphs 0105- 0110.) Tanaka et al teaches that suitable resins or binders to be mixed with the photochromic material include (meth)acrylic resins, vinyl acetate or chloride resins, polyethylene resin, polypropylene resin, polystyrene resin and polycarbonate resin (Paragraphs 0106 and 0116; inherently transparent polymers.) Tanaka et al also teaches that a resin composition can be formed by dissolving or dispersing a solution or dispersion of the photochromic material in a solvent such as THF in the base resin or by directly dissolving or dispersing the material in the resin (Paragraphs 0101-0108.) Tanaka et al teaches that known dispersants, plasticizers, or the like may be added to the resin composition (Paragraph 0108.) Tanaka et al also teaches an embodiment wherein the photochromic material as solid materials are mixed with a binder such as an inorganic binder like water glass or organic binders such as polyalkyl(meth)acrylate and vinyl chloride/vinyl acetate copolymer and is then

molded into a desired shape such as by extrusion molding into a flat plate shape or compression molding into a complex shape, and the molded product thus prepared will change color under irradiation depending upon the does of the radiation (Paragraphs 0112-0123.) Tanaka et al further teaches an embodiment wherein the composition is a layer incorporated into a laminate with a layer thickness of from 0.01 to 10mm and may include a blend with the same binders as well as other additives such as a UV absorber (Paragraphs 0124-0152.)

6. Claims 1, 5, 6, 17, 18, 20, 21, 33, 35, 38, 41 and 68 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al (USPN 5,084,623.) Lewis et al teaches a radiation dosage indicator wherein the indicator includes a transparent radiation sensitive ply 16 which may be a film of a radiation sensitive polyacetylene system that provides a color change or a change is opacity caused by polymerization of a polyacetylene material (Abstract; Col. 4, lines 55-Col. 5, line 2.) Lewis et al teaches that the radiation sensitive ply 16 can be formed from various transparent polymer material such as polyester, polystyrene, and other film forming materials and that a coating of crystalline polyacetylene for example pentacosa-10, 12-diynoic acid disposed in a binder such as polyvinylacetate and teach one example wherein the coating layer has a thickness of approximately 1 mil. Lewis et al also teaches that a color filter can be incorporated into the indicator to enhance the color change of the radiation sensitive material by incorporating or mixing a dye or pigment in a separate layer or directly into the radiation sensitive ply or the substrate, with one example including a separate ply 26 having a thickness of 0.01 to 100 mil (Col. 6.) Lewis et al teaches that the thickness of ply 16 should be sufficient to provide mechanical integrity without excessive bulkiness of the dosimeter with typical thicknesses ranging from about 0.1 mil to about 100 mil with the thickness of the radiation

sensitive coating being about 0.01 mil to 25 mils (reads upon the claimed thickness of greater than 100 microns and at this thickness would be "self-supporting"; Col. 7, lines 1-10.) With respect to Claim 21, though Lewis et al does not specifically teach how the polymer utilized as the binder material is produced, the Examiner takes the position that this limitation is a product-by-process limitation that does not appear to materially or structurally affect the final polymer or end product and hence the teachings of Lewis et al reads upon the claim.

Claim Rejections - 35 USC § 103

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al. The teachings of Tanaka et al are discussed above. Though Tanaka et al fails to teach the instantly claimed diacetylene compounds as the radiation sensitive material, one having ordinary skill in the art at the time of the invention would have been motivated to utilize conventional, functionally equivalent radiation sensitive materials in the invention taught by Tanaka et al wherein the claimed diacetylene compounds are obvious, conventional radiation sensitive material utilized in the art and would have been obvious to one having ordinary skill in the art at the time of the invention, given the predictable results and reasonable expectation of success.

8. Claims 12-13, 27, 30-32, 39 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al. The teachings of Lewis et al are discussed above. Though Lewis et al teaches that radiation sensitive coating or layer can be formed from a known radiation sensitive polyacetylene system, Lewis et al does not specifically teach incorporating the claimed additives. However, one having ordinary skill in the art at the time of the invention would have been motivated to incorporate conventional additives or observable change enhancers, such as those instantly claimed, in the invention taught by Lewis et al given the reasonable expectation

of success. In terms of solvent casting or solidification of a molten polymer composition comprising the radiation sensitive material, Lewis et al does not specifically teach how the radiation sensitive coating layer is formed however solvent casting from a suitable solvent or solidification from a molten material are obvious, functionally equivalent polymer film forming or casting methods in the art and would have been obvious to one having ordinary skill in the art at the time of the invention, wherein one skilled in the art would have been motivated to utilize any conventional solvent including the instantly claimed solvents which are obvious species of solvents utilized in the art, given the predictable results and reasonable expectation of success.

Response to Arguments

9. Applicant's arguments filed 7/16/10 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1787
September 28, 2010